UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,873	07/16/2003	Harold E. Mattice	IGT1P096/P000824-001	1742

79646 7590 02/22/2010 Weaver Austin Villeneuve & Sampson LLP - IGT Attn: IGT P.O. Box 70250 Oakland, CA 94612-0250	**EXAMINER** DEODHAR, OMKAR A

ART UNIT	PAPER NUMBER
3714	

NOTIFICATION DATE	DELIVERY MODE
02/22/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@wavsip.com

	Application No.	Applicant(s)
Office Action Summary	10/621,873	MATTICE ET AL.
	Examiner	Art Unit	
	OMKAR A. DEODHAR	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *15 September 2009*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-9 and 11-30* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-9 and 11-30* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *11/12/2009*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

Non-Final Rejection

Response to Arguments & Amendment

Applicant argues that Alcorn does not disclose or render obvious the amended claim limitations drawn to "determining whether to hold said volatile programmable electronic device in a reset mode." Examiner respectfully disagrees.

While Applicant's Specification, Page 29, Paragraph 56, discloses that the FPGA can be held in reset mode, the Specification goes on to disclose that in other embodiments, "holding of the FPGA in reset mode is presumable not possible, while in other embodiments, such a hold may be optional, or designed as mandatory, as desired." This is viewed as admission that placing the volatile device in reset mode is merely a design consideration. Applicant is encouraged to at least explain patentable differences between Alcorn & the claimed invention, when Applicant responds next.

The claim amendment is addressed below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites "holding *the* a plurality of operating contents". Examiner believes this should recite "holding a plurality of operating contents" and the claim has been interpreted in this manner. Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9 & 11-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Alcorn (US 6,149,522).

Claims 1, 2, 7-9, 11-13 & 16-19: Alcorn discloses a method & processor based

machine that authenticates configuration data within or about a gaming machine with

respect to a gaming machine boot process (Abstract – "The authentication program

stored in the ... performs an authentication check on the casino game data set at

appropriate times ... prior to commencement of game play ..." Boot processes take

place prior to game play.)

the method comprising configuring a central processing unit designed or

configured to execute executable programming instructions for generating a wager-

based game on the gaming machine;

(Figure 1, processor 12. The CPU is programmed to provide the authentication

routine. Alcorn's system is for gaming machines which generate wager based games.)

storing the executable programming instructions in a memory device for

generating the wager- based game; connecting a volatile programmable electronic

device comprising a plurality of logic elements programmable to form logic gates in a

communication path between the central processing unit & the memory device;

(Col. 1. Lines 25-39 teach various types of volatile & non-volatile memory. Alcorn

teaches that such components are known in the art & used in electronic gaming

machines to augment the traditional slot machine game. See Col. 7. Lines 1-15

teaching ROM & non-volatile RAM.

It would therefore have been obvious to a person of ordinary skill in the art to use

volatile memory in the configuration disclosed by Figure 2. Since volatile memory

cannot hold contents without power, this yields the predictable results of ensuring that

Alcorn's loadable data set is erased upon shutdown to prevent tampering. Memory is

necessarily comprised of the claimed logic elements. Executable instructions are stored

in memory. Memory devices are coupled to the processor [& other gaming devices] in a

path as shown in Figure 1.)

Monitoring a communication between the central processing unit & at least one

of an input device & and output device by using the volatile programmable electronic

device; storing instructions for configuring the volatile programmable electronic device

to enable communications between the central processing unit & the memory device,

wherein said storing instructions comprises storing the instructions within a read only

configuration file included within a configuration;

(The system monitors communication between the various components shown in

Figure 1. Item 25 shows a general purpose I/O device providing an interface to the

game mechanical devices. The I/O device is coupled to the components shown in

Figure 1 including the memory devices. As explained above, the memory devices may

comprise both volatile & non-volatile types of storage.

Further, Alcorn teaches that for audit purposes, authentication information is

transmitted via networking subsystem 21 to an on-site or off-site location. See Col. 9.

Lines 32-40. This also requires monitoring of communications between the devices.

The devices shown in Figures 2 & 3 store executable instructions. They also

store the boot file [a configuration file]. Col. 8. Lines 1-5 explicitly teach that ROM 29 &

ROM 30 are unalterable memory devices. Thus, they are read-only memory devices.

See also Figure 7 Steps 102-108 where Alcorn specifically teaches loading the boot file

[& other necessary applications] from memory).

Accessing a separate read only custodial file, wherein at least a substantial

portion of said custodial file is identical to at least a substantial portion of said

configuration file when said configuration file is authentic, said custodial file residing in a

location separate from said configurator; (In Col. 2. Lines 51-56, Alcorn teaches read-

only memory storing a game data set. A custodial file is taught in Col. 3. Lines 50-55.

When the configuration file is authentic, it should match the contents of the custodial

file.)

holding a plurality of the operating contents of said volatile programmable

electronic device as substantially empty upon a shut down phase of said gaming

machine to disable communication between the CPU & memory device;

(Volatile memory is inherently emptied upon a computer's shutdown phase

because volatile memory requires power to maintain stored information.)

booting up said gaming machine after said shut down phase;

(When the machine is subsequently powered on, it executes a boot cycle as in

Fig. 7).

transferring said configuration file from said configurator to said volatile

programmable electronic device; configuring said volatile programmable electronic

device with said configuration file; comparing at least a representative portion of data

from said configuration file with at least a representative portion of data from said

custodial file; confirming whether said configuration file has been successfully compared

to said custodial file to a sufficient level of satisfaction;

(Referring to Figure 7, Steps 102 & 104, the boot loader is the "configurator" &

the BIOS is the "configuration file". It is loaded {transferred} into memory. The custodial

file is taught in Col. 3. Lines 50-55. New files are compared to the custodial file when

the authentication program determines their validity. The memory device is programmed

to operate with BIOS. Comparing entire files encompasses the claimed "comparing at

least a representative portion." BIOS is loaded into the main memory, as is bootstrap,

OS, drivers and authentication software. In Step 106, pertinent game data such as graphics, sound and money handling data sets are accessed. In Step 108, data validity is determined. If the data is valid, the application is loaded into the device's main memory. If the data is invalid, the application is prohibited from loading. In Step 118, a second authentication program further determines validity. Again, a valid data determination leads to game data sets being loaded and an invalid data determination prohibits loading of game data sets.)

and permitting a substantial amount of regular gaming machine operations only after a successful confirming step, facilitating communication between said memory device and said central processing unit upon determining that said configuration file has been successfully compared to said custodial file.

(The process explained above is repeated every time the machine is powered on. Additionally, the process may be performed on a periodic basis, or on demand. See also Col. 5. Lines 5-14 & Lines 28-43. Once powered successfully, gaming operations are permitted as in Fig. 5, Step 124.)

Regarding the amendment, "determining whether to hold said volatile programmable electronic device in a reset mode," while Applicant's Specification, Page 29, Paragraph 56, discloses that the FPGA can be held in reset mode, the Specification goes on to disclose that in other embodiments, "holding of the FPGA in reset mode is presumable not possible, while in other embodiments, such a hold may be optional, or designed as mandatory, as desired." This is viewed as admission that placing the volatile device in reset mode is merely a design consideration.

Therefore, since Applicant has disclosed that holding the volatile device in reset mode is optional, Examiner cannot but conclude that this have been a matter of obvious design choice to a person of ordinary skill in the art at the time of Applicant's invention.

Claims 3-6, 14, 15 & 20: These claim limitations are substantially addressed with regard to the discussion in claim 1. Further, Alcorn teaches that typical gaming machines incorporate memory devices found in the computer art. Col. 1. Lines 25-39 teach various types of volatile & non-volatile memory. Alcorn teaches that such components are used in electronic gaming machines to augment the traditional slot machine game. See Col. 7. Lines 1-15 teaching ROM & non-volatile RAM. Applicant's Specification, Page 17, Paragraph 32 discloses a variety of preferable devices and discloses these as SPLD, CPLD, FPGA, and/or more other similar volatile devices. This is viewed as disclosing the equivalence of these devices in Applicant's invention.

Thus, the specific type of memory device i.e., volatile/non-volatile, ROM, EEPROM, FPGA or PLD implemented in the system is viewed as a matter of design choice. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to use a wide variety of readily available storage devices in the authentication process because this is viewed as a mere design consideration failing to patentably distinguish over Alcorn. Using these types of memory devices in a gaming machine (a computer) is well within the level of ordinary skill in the art & yields predictable results.

These claims, as amended, require connecting a volatile memory device in the communication path between the CPU & the memory device of claim 1. Alcorn teaches connecting a storage means to main memory to load the BIOS [a configuration file], bootstrap, OS & drivers from the storage means to main memory. See the discussion in Col. 5. Lines 63-67 & Col. 6. Lines 1-3. The device is connected such that it is in a communication path between the CPU & main memory. As explained above, Alcorn teaches different types of memory including a volatile device to be used as the storage means.

Claim 21: While Alcorn teaches prohibiting loading of an invalid boot application (Figure 7, Step 110), Alcorn does not explicitly teach determining not to facilitate communication between said memory device and said central processing unit upon determining that said configuration file has been unsuccessfully compared to said custodial file.

(It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to not permit communication upon an unsuccessful comparison of a configuration file to a custodial file. Given that maintaining security of a gaming machine is of paramount importance, not permitting potentially dangerous software execution yields predictable results.)

Claim 22: This claim requires an input device having a coin in switch or an input switch & output device with a video display – Alcorn teaches that typical gaming machines have coin acceptors & video displays. See Col. 1. Lines 32-39. His machine is no different. See Figure 1, Video Subsystem 22 & Col. 13. Lines 12-13 teaching a

coin insert slot. Additionally, the gaming machine requires some type of input mechanism so it can be played.

Claims 23-30: These claims require determining when the FPGA is placed in reset mode & when it is removed from the reset mode. As explained above with respect to claim 1, however, since Applicant disclosed that holding the FPGA in reset mode is optional, (See Specification, Page 29, Paragraph 56), these limitations would have been matters of obvious design choice to a person of ordinary skill in the art at the time of Applicant's invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMKAR A. DEODHAR whose telephone number is (571)272-1647. The examiner can normally be reached on M-F: 8AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OAD/

/Peter D. Vo/

Supervisory Patent Examiner, Art Unit 3714